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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,915	03/13/2001	Takeyuki Goto	108889	8925

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EXAMINER
WINTER, GENTLE E

ART UNIT	PAPER NUMBER
1746	

DATE MAILED: 04/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/803,915	GOTO ET AL.	
	Examiner	Art Unit	
	Gentle E. Winter	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-7 and 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application Laid-Open No. 9-86188 (hereinafter '188) and United States Patent No. 6,163,454 to Strickler (hereinafter '454).

2. As to claim 1, 7 and 12, figure 1 of '188 discloses a battery structure comprising an upper covering member (depicted as element 7B), having a plurality of holding ribs (see element 5), and in which a plurality of ventilating holes (elements 11 and 12); a middle covering member (element 7C), having a plurality of holding ribs (element 5); a lower covering member (element 7A), having a plurality of holding ribs (element 5); and two side covering members (elements 8 and 9). And a plurality of venting holes on the top and bottom (see e.g. element 11). With specific respect to claim 7, the connecting member is identically disclosed as elements 16 in figure 5. As to claim 12, disclosing that the "battery cell is covered with an outer tube made of resin material", the same is disclosed as element 11 in figure 2.

3. What is not explicitly disclosed is that the plurality of ventilating holes (element 11), have total aperture area is larger than a total aperture area of the ventilating holes formed in the upper covering member. This is believed to be inherent, or if not inherent overtly obvious and consistent with well known and documented design protocol. However, in the event that applicant takes the position that the different hole sizing is not inherent or well known in the art, '454 is provided for the teaching of different hole sizes. The motivation for making the combination is the same is that disclosed in '454. Specifically, see e.g. column 3, line 62, disclosing why it is desirable to have relatively larger sized exhaust holes. Specifically, cooling fan modules are required work harder if they have to blow, or push, cooling air through relatively smaller-sized exhaust apertures. This additional load proves to be much more difficult and inefficient than drawing cooling air through these smaller-sized exhaust apertures. It is noted that the '454 invention is drawn to a system that overcomes the shortcomings of the prior art systems that operate with relatively larger exhaust ports. See figure 1 of the '454 reference disclosing the prior art of record systems.

4. As to claim 2 disclosing an aperture area of each of the ventilating holes formed in the upper covering member is smaller than that of each of the ventilating holes formed in the lower covering member, and the number of the ventilating holes formed in the upper covering member is larger than that of the ventilating holes formed in the lower covering member. This is identically disclosed in figure 1 of the '454 reference. The motivation for making the combination is as indicated above.

5. As to claim 3, disclosing a circular arc shaped holding end surfaces, on which groove portions are formed in a circumferential direction, and adhesives are filled up in the groove portions. The '188 reference discloses the disclosed groove portions. See element 13 in the drawing and associated text, especially the second full paragraph on page 3 of the provided translation. The groove is disclosed to be filled with "sealant" which is equivalent to the disclosed "adhesive" when read in light of the specification. See also page 2 of the provided translation last full paragraph.

6. As to claim 4, disclosing a tunnel part, which penetrates through the upper covering member in a longitudinal direction. Element 16 of the '188 reference discloses a tunnel penetrating the upper covering member. Further, each of the holes in the cover would read on this limitation.

7. As to claim 5 disclosing the middle covering member has strengthening ribs in a longitudinal direction. The fourth full paragraph of page 3, of the provided translation and element 15 of the drawing disclose "reinforcing ribs", which read on the claim.

8. As to claim 6, disclosing a plurality of foot portions which are provided so as to project out from a bottom face of the lower covering are formed, and the bottom face is separated from a mounting floor for the battery case. Element 18 and associated text in the provided disclosure disclose the "foot portions" (see e.g. page 4, third full paragraph).

9. As to claim 13, disclosing that the battery case accommodates eight battery cells in total in four rows along a horizontal direction and in two rows along a vertical direction. This is identically disclosed in the figure 1 of the '188 reference.

10. As to claim 14, disclosing that each of joining end faces of the upper covering member, the middle covering member and the lower covering member has a straight scarf joint structure. This is identically disclosed in figure 1 of the '188 reference. See e.g. the end portion of the various components.

11. As to claim 15, further limiting claim 2, disclosing that the aperture area of each of the ventilating holes formed in the upper covering member is 1/2 of that of each of the ventilating holes formed in the lower covering member. This variation, the proportional difference between the holes is the recitation of the adjustment result effective variables. As an initial matter it is believed that the exit holes of the '454 reference are twice the size of the entrance holes. However, it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

12. As to claim 16, further limiting claim 3, disclosing the holding ribs are at least formed at positions where both end portions of electrode groups of the battery cells are held. This is identically disclosed at figure 1 in the '188 reference. See especially element 5, and associated text.

13. As to claim 17 further limiting claim 3, disclosing the holing ribs is formed at a central position, in a longitudinal direction, of the battery cells. Again figure 1 in the '188 reference discloses this feature. See the ribs throughout the structure.

14. As to claim 18, further limiting claim 4, disclosing the tunnel part is formed at an inside of the upper covering member. As was indicated above, the holes (element 11) read on this limitation.

15. As to claim 19 and 20 disclosing a battery module having the battery structure disclosed in claim 1 and 2 respectively, the structure disclosed in figure 1 of '188 is a module.

16. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over '188 and '454 as disclosed above and United States Patent No. 5,912,092 to Maruyama ('092).

17. As to claim 8, disclosing a plurality of fuse holding ribs for holding a fuse from a bottom side are formed so as to project toward the fuse on an upper portion of one of the side covering members, and the fuse is held and fixed in a vertical direction by the fuse holding ribs and a fuse cover on which a plurality of fuse holding ribs for holding the fuse from an upper side are formed so as to project inside the fuse cover. As an initial matter, the structure of the fuse holder is believed to be the structural limitation. Each and every limitation of claim 8 is identically disclosed in the aggregated references, as set forth above, except the fuse holder of claim 8 is not explicitly disclosed. While the same is believed inherent in the '188 reference, which provides the aperture for the same. Nonetheless, '092 is provided for the missing

element, and explicitly provides the motivation for making the combination. Specifically, column 3, line 33 *et seq.* discloses a battery package (from the title) that includes a temperature responsive fuse (see element 40 and associated text) which fuses to open a circuit in the event of an overheated condition occurring in the battery (shown as element 12).

18. As to claim 10, disclosing external output terminals are formed vertically via an insulating material so as to stride over the fuse on the upper portion of one of the side covering members. Figure 1, of the '188 reference discloses external output terminal formed vertically via an insulating material (16 and associated text). A fuse can stride over the upper portion of the side covering.

19. As to claims 9 and 11, disclosing an accommodating portion for accommodating a battery cell control unit disposed at an upper portion of another of the side covering members, a plurality of unit holding ribs for holding the battery cell control unit from a bottom side are formed so as to project toward the battery cell control unit, and the battery cell control unit is held and fixed in a vertical direction by the unit holding ribs and a battery cell control unit cover on which a plurality of unit holding ribs for holding the battery cell control unit from an upper side are formed so as to project inside the battery cell control unit cover. The presence of a control unit is not explicitly disclosed in either '188 or '454. However, a control panel is disclosed in '092 as element 34. See e.g. column 3, line 53 *et seq.* The motivation for providing the control panel is explicitly disclosed in the '092 reference. Specifically, the control unit prevents overcharging and indicates when charging is indicated. The specific placement of the control unit is believed

to be inherent in the '092 reference, however, with regard to the specific placement it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. The direct fax number for this examiner is (703) 746-7746.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

April 1, 2003

RANDY GULAKOWSKI
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